

Opisthobranch Mollusks Dredged in San Francisco Bay During the Period 1966 to 1971

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(1 Text figure)

INTRODUCTION

PREVIOUSLY UNREPORTED NUDIBRANCHS from San Francisco Bay have been dredged from 1966 to 1971. Extensive accounts of the opisthobranch mollusks of the central California coast have been given by MARCUS (1961); STEIN-

BERG (1963) and MACFARLAND (1966), while the occurrence of nudibranchs in San Francisco Bay has been reported by GOSLINER & WILLIAMS (1970) and BEHRENS (1971). APLIN (1967) reports that nudibranchs were dredged and collected intertidally during his study, but not identified.



Figure 1

San Francisco Bay from Red Rock Island on the north to South Bay. Insert shows San Francisco Bay.

1. *Acanthodoris nanaimoensis*;
3. *Anisodoris nobilis*;

2. *Aeolidia papillosa*;
4. *Archidoris montereyensis*;

5. *Armina californica*;
7. *Diaulula sandiegensis*;

6. *Dendronotus frondosus*;
8. *Dirona picta*;

9. *Hermisenda crassicornis*;

10. *Tritonia exsulans*

Biological samples were taken in San Francisco Bay using an Otter trawl and a bag dredge periodically from May 1966 to August 1971. Nudibranchs were encountered frequently during the summer months and rarely in winter months.

DISTRIBUTION AND OCCURRENCE

- Acanthodoris nanaimoensis* O'Donoghue, 1921
July 1971
North of Angel Island
- Aeolidia papillosa* (Linnaeus, 1761)
July, August 1969
South of Red Rock Island; south San Francisco Bay
- Anisodoris nobilis* (MacFarland, 1905)
May 1968
West of Treasure Island
- Archidoris montereyensis* (Cooper, 1862)
July 1966; August 1971
West of Treasure Island; south San Francisco Bay
- Armina californica* (Cooper, 1862)
July, August 1971
West of Treasure Island; South Hampton Shoal
- Dendronotus frondosus* (Ascanius, 1774)
June, July 1966; July 1968; July 1971
West and north of Treasure Island; South Hampton Shoal
- Diaulula sandiegensis* (Cooper, 1862)
July 1966; August 1969
South San Francisco Bay
- Dirona picta* MacFarland in Cockerell & Eliot, 1905
December 1969
South San Francisco Bay
- Hermisenda crassicornis* (Eschscholtz, 1831)
July 1966; May 1968; July 1969; July 1971
South San Francisco Bay; west of Treasure Island;
South Hampton Shoal; south of Red Rock Island

Tritonia exsulans Bergh, 1894

- May, June, July 1966; May, July 1968; January 1969;
January 1970; July 1971
East, west, and north of Treasure Island; South San Francisco Bay; South Hampton Shoal

The most frequently encountered and most numerous nudibranch was *Tritonia exsulans* which occurred in the northern and southern regions of San Francisco Bay and throughout the sampling period.

During the summer months *Dendronotus frondosus* and *Hermisenda crassicornis* were dredged and maintained in the laboratory where numerous egg masses were laid.

Occurring infrequently in summer months were *Archidoris montereyensis* and *Diaulula sandiegensis*.

Aeolidia papillosa, *Anisodoris nobilis* and *Armina californica* rarely occurred, but when collected, numerous individuals of each species were obtained.

Acanthodoris nanaimoensis and *Dirona picta* were represented by single individuals only.

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